RCRA 3012

EPA **POTENTIAL HAZARDOUS WASTE SITE**
(TENTATIVE) ~~FINAL STRATEGY~~ **DETERMINATION**

REGION	SITE NUMBER
6	LA 1015

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force *(EN-335)*; 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Air Products + Chemicals, Inc.	LA Hwy 30	
C. CITY	**D. STATE**	**E. ZIP CODE**
St. Gabriel	LA	70776

II. FINAL DETERMINATION

Indicate the recommended action*(s)* and agency*(ies)* that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY: EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED					
B. REMEDIAL ACTION NEEDED, BUT NO RESOURCES AVAILABLE *(If yes, complete Section III.)*					
C. REMEDIAL ACTION *(If yes, complete Section IV.)*					X
D. ENFORCEMENT ACTION *(If yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR FINAL STRATEGY DETERMINATION

Site contains (2) surface impoundments and (1) open pile of chemically "fixed" bio-sludge. Both the impoundment & the open pile have been sampled & analyzed as having levels of contamination insignificant to be considered a strong threat at this time. The impoundments are currently monitored by a well system semi-annually by DEQ. The open pile should be properly closed as a solid waste landfill and/or wastes removed & shipped off-site.

F. IF A CASE DEVELOPMENT PLAN HAS BEEN PREPARED, SPECIFY THE DATE PREPARED *(mo., day, & yr.)*

State should oversee this closure.

G. IF AN ENFORCEMENT CASE HAS BEEN FILED, SPECIFY THE DATE FILED *(mo., day, & yr.)*

No further investigation under RCRA 3012 program.

[signature] 10/31/89

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*
G. W. Guerra (6AW-SC)	214 . 767-4075	26 OCT 84

III. REMEDIAL ACTIONS TO BE TAKEN WHEN RESOURCES BECOME AVAILABLE

List all remedial actions, such as excavation, removal, etc. to be taken as soon as resources become available. See instructions for a list of Key Words for each of the actions to be used in the spaces below. Provide an estimate of the approximate cost of the remedy.

A. REMEDIAL ACTION	B. ESTIMATED COST	C. REMARKS
	$	LAD 085 551 877
	$	
	$	
	$	SUPERFUND FILE
	$	
	$	SEP 18 1992
	$	REORGANIZED
	$	
D. TOTAL ESTIMATED COST	$	

EPA Form T2070-5 (10-79)

Continue On Reverse

Continued From Page 2

IV. SAMPLING INFORMATION (continued)

C. PHOTOS

1. TYPE OF PHOTOS: [XX] a. GROUND [ ] b. AERIAL

2. PHOTOS IN CUSTODY OF: The Earth Technology Corporation (To be submitted as an addendum)

D. SITE MAPPED?

[XX] YES. SPECIFY LOCATION OF MAPS: see Figure 1

E. COORDINATES

1. LATITUDE (deg.-min.-sec.): 30°15'05" N

2. LONGITUDE (deg.-min.-sec.): 91°05'34"W

V. SITE INFORMATION

A. SITE STATUS

[XX] 1. ACTIVE (Those inductrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

[ ] 2. INACTIVE (Those sites which no longer receive wastes.)

[ ] 3. OTHER (specify): _____ (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

[ ] 1. NO [XX] 2. YES (specify generator's four-digit SIC Code): 2869

C. AREA OF SITE (in acres): 112; 20 acres are developed

D. ARE THERE BUILDINGS ON THE SITE?

[ ] 1. NO [XX] 2. YES (specify): administration and process related building

VI. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

	A. TRANSPORTER		B. STORER		C. TREATER		D. DISPOSER
	1. RAIL	XX	1. PILE		1. FILTRATION		1. LANDFILL
	2. SHIP	XX	2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE	XX	3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK	XX	4. TANK, ABOVE GROUND	XX	4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS./TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify): NOTE: 1 and 2 do not contain hazardous waste; 3 and 4 are used to store hazardous waste.	XX	6. BIOLOGICAL TREATMENT	XX	6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify): NOTE: Incinerate corrosive and ignitable waste
					9. OTHER (specify):		

E. SUPPLEMENTAL REPORTS: If the site falls within any of the categories listed below, Supplemental Reports must be completed. Indicate which Supplemental Reports you have filled out and attached to this for..

[ ] 1. STORAGE [ ] 2. INCINERATION [ ] 3. LANDFILL [XX] 4. SURFACE IMPOUNDMENT [ ] 5. DEEP WELL

[ ] 6. CHEM/BIO/PHYS TREATMENT [ ] 7. LANDFARM [ ] 8. OPEN DUMP [ ] 9. TRANSPORTER [ ] 10. RECYCLOR/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

[XX] 1. LIQUID [XX] 2. SOLID* [XX] 3. SLUDGE** [ ] 4. GAS

*Non-hazardous solids and hazardous vaporizer tar

** API separator sludge (hazardous) and bio-sludge (non-hazardous)

B. WASTE CHARACTERISTICS

[X] 1. CORROSIVE [XX] 2. IGNITABLE [ ] 3. RADIOACTIVE [ ] 4. HIGHLY VOLATILE

[X] 5. TOXIC [ ] 6. REACTIVE [ ] 7. INERT [X] 8. FLAMMABLE

NOTE: 1,2 disposed in incinerator; 5 disposed off-site.

[ ] 9. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

Yes, manifest of amounts incinerated and transported off-site for disposal.

Continued From Page 4

VIII. HAZARD DESCRIPTION *(continued*

☐ B. NON-WORKER INJURY/EXPOSURE

☐ C. WORKER INJURY/EXPOSURE

☐ D. CONTAMINATION OF WATER SUPPLY

☐ E. CONTAMINATION OF FOOD CHAIN

☐ F. CONTAMINATION OF GROUND WATER

☐ G. CONTAMINATION OF SURFACE WATER

Continued From Page 6

VIII. HAZARD DESCRIPTION *(continue*

☐ N. FIRE OR EXPLOSION

☐ O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

☐ P. SEWER, STORM DRAIN PROBLEMS

☐ Q. EROSION PROBLEMS

☐ R. INADEQUATE SECURITY

☐ S. INCOMPATIBLE WASTES

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA (continued)

H. LIST ALL DRINKING WATER WELLS WITHIN A 1/4 MILE RADIUS OF SITE

1. WELL	2. DEPTH (specify unit)	3. LOCATION (proximity to population/buildings)	4. NON-COMMUNITY (mark 'X')	5. COMMUNITY (mark 'X')
Drinking/ Supply	230' (screened at 145 to 205')	Within property boundaries	X	

I. RECEIVING WATER

1. NAME: Mississippi River

☐ 2. SEWERS ☒ 3. STREAMS/RIVERS ☐ 4. LAKES/RESERVOIRS ☐ 5. OTHER (specify):

6. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

Secondary contact recreation and propagation of fish and wild life.

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN: N/A

☐ A. KNOWN FAULT ZONE ☐ B. KARST ZONE ☐ C. 100 YEAR FLOOD PLAIN ☐ D. WETLAND

☐ E. A REGULATED FLOODWAY ☐ F. CRITICAL HABITAT ☐ G. RECHARGE ZONE OR SOLE SOURCE AQUIFER

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

Mark 'X' to indicate the type(s) of geological material observed and specify where necessary, the component parts.

'X'	A. OVERBURDEN	'X'	B. BEDROCK (specify below)	'X'	C. OTHER (specify below)
	1. SAND				
X	2. CLAY				
	3. GRAVEL				

XIII. SOIL PERMEABILITY

☐ A. UNKNOWN ☐ B. VERY HIGH (100,000 to 1000 cm/sec.) ☐ C. HIGH (1000 to 10 cm/sec.)

☐ D. MODERATE (10 to .1 cm/sec.) ☐ E. LOW (.1 to .001 cm/sec.) ☒ F. VERY LOW (.001 to .00001 cm/sec.)

G. RECHARGE AREA

☐ 1. YES ☒ 2. NO 3. COMMENTS:

H. DISCHARGE AREA

☐ 1. YES ☒ 2. NO 3. COMMENTS:

I. SLOPE

1. ESTIMATE % OF SLOPE: 0-1

2. SPECIFY DIRECTION OF SLOPE, CONDITION OF SLOPE, ETC.: East (away from river)

J. OTHER GEOLOGICAL DATA

The Pliestocene alluvium consists of an approximately 100-foot thick clay formation with silt lenses. The average vertical permeability of the topsoil/clay on the site is 1.4 X 10^{-6} to 6.4 X 10^{-8} cm/sec. The uppermost aquifer "Plaquemine-" or "Gonzales-" Aquifer is located at a depth of about 100 feet and consists of fine to coarse sand and gravel. A portion of the aquifer is saltwater-bearing. In this area, the freshwater/saltwater

Continue On Reverse

(See Attachment)

SURFACE IMP IDMENTS SITE INSPECTION REPORT
(Supplemental Report)

INSTRUCTION
Answer and Explain as Necessary.

1. TYPE OF IMPOUNDMENT
Earthen impoundment containing non-hazardous bio-sludge; impoundment consists of an east lagoon and a west lagoon.

2. STABILITY/CONDITION OF EMBANKMENTS
Good.

3. EVIDENCE OF SITE INSTABILITY *(Erosion, Settling, Sink Holes, etc.)*
☐ YES ☒ NO

4. EVIDENCE OF DISPOSAL OF IGNITABLE OR REACTIVE WASTE
☐ YES ☒ NO

5. ONLY COMPATIBLE WASTES ARE STORED OR DISPOSED OF IN THE IMPOUNDMENT
☒ YES ☐ NO

6. RECORDS CHECKED FOR CONTENTS AND LOCATION OF EACH SURFACE IMPOUNDMENT
☒ YES ☐ NO

7. IMPOUNDMENT HAS LINER SYSTEM
☒ YES ☐ NO Natural clay.

7a. INTEGRITY OF LINER SYSTEM CHECKED
☐ YES ☐ NO N/A

7b. FINDINGS
N/A

8. SOIL STRUCTURE AND SUBSTRUCTURE
Clay soil with a permeability ranging from 1.4×10^{-6} to 6.4×10^{-8} cm/sec.

9. MONITORING WELLS (See attachment)
☒ YES ☐ NO

10. LENGTH, WIDTH, AND DEPTH
LENGTH 100' WIDTH 150' DEPTH 10'

11. CALCULATED VOLUMETRIC CAPACITY
150,000 cubic feet (total)

12. PERCENT OF CAPACITY REMAINING
East lagoon - <10%; West lagoon - 30%

13. ESTIMATE FREEBOARD
East lagoon - <1%; West lagoon - 3 feet.

14. SOLIDS DEPOSITION
☒ YES ☐ NO Approximately 10% solid content in East lagoon (which is at its capacity; Approximately 1-2% solids in West lagoon.

15. DREDGING DISPOSAL METHOD
The sludge from the West lagoon was pumped in August 1980 and was stored as a (See Attach.)

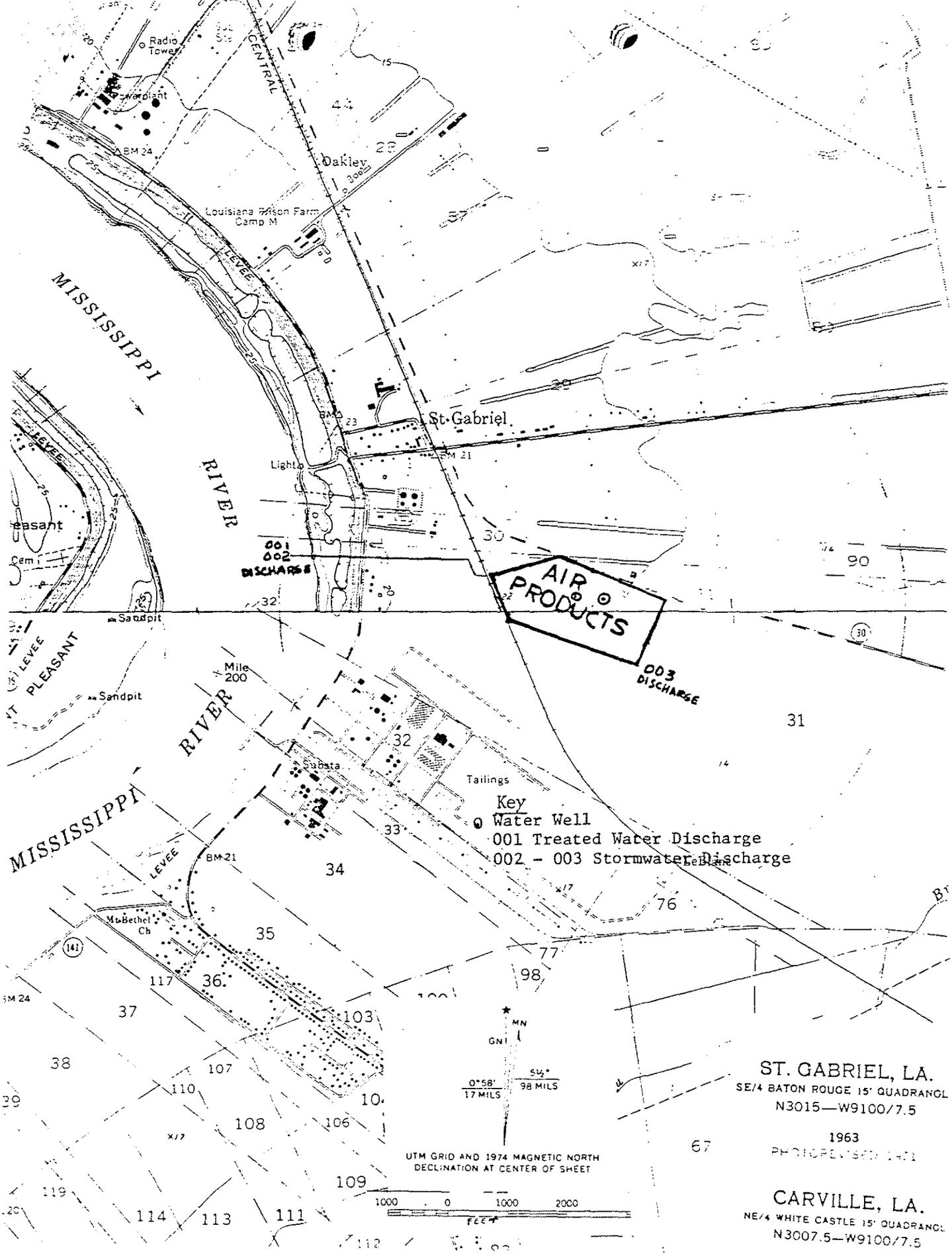
16. OTHER EQUIPMENT

ATTACHMENT A

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT SUPPLEMENT SHEET

INSTRUCTION - This sheet is provided to give additional information in explanation of a question on the Form T2070-2.

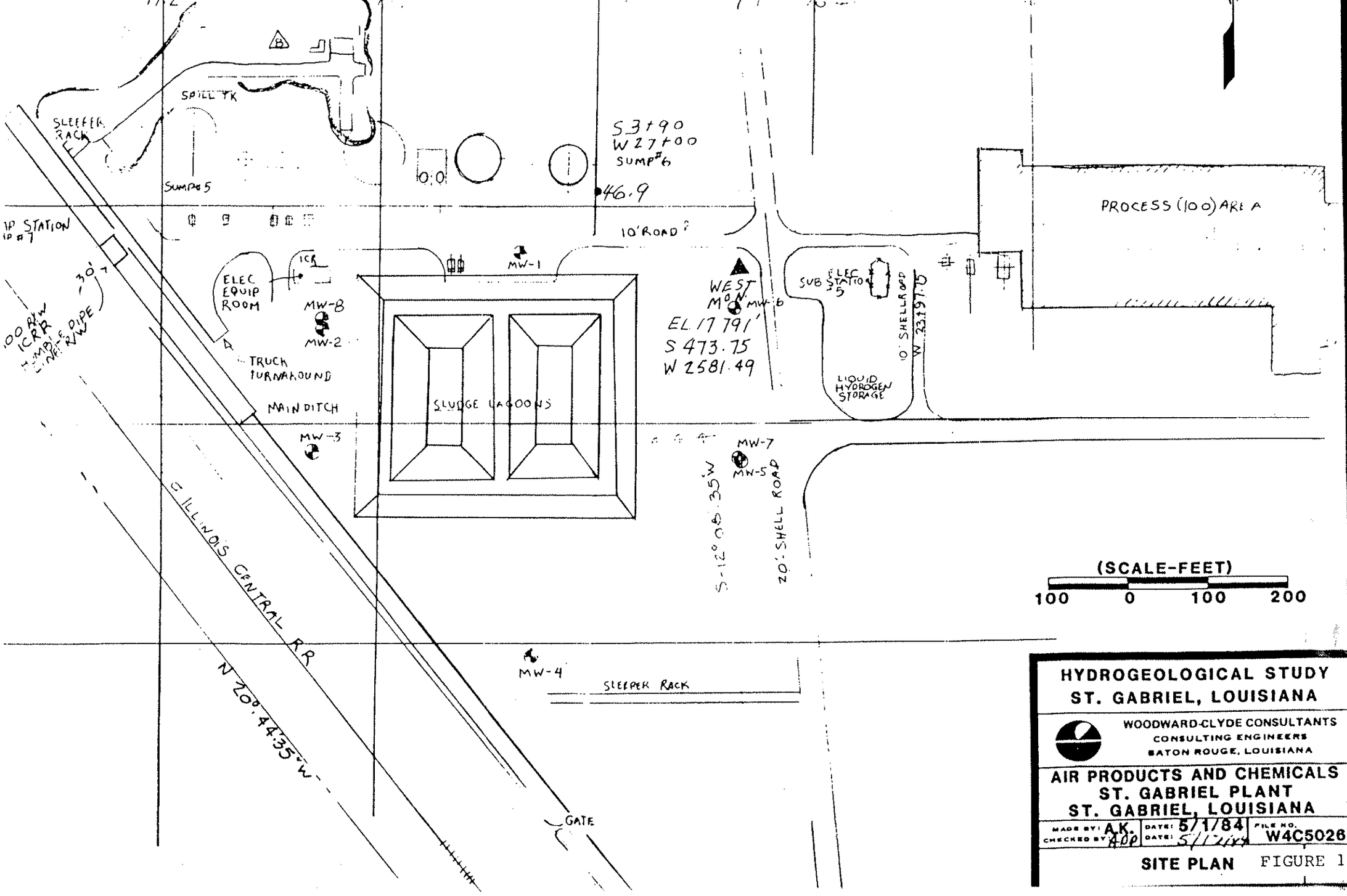
Corresponding Number on Form	Additional Remark and/or Explanation
XIII, J.	contact is located at a depth of approximately 200 feet. The yield of the drinking/supply water well (screened between 145 to 205 feet) on site is 700 GPM.
	Surface Impoundments Site Inspection Report
9.	Eight ground-water monitoring wells are located surrounding the impoundments. The wells are shallow in depth (12 to 18 feet deep), with the exception of wells MW-7 and MW-8, which are 70 feet deep (see map for locations). Water samples are collected semi-annually, and are analyzed for the parameters specified by DEQ. The first set of samples were collected in April 1984. The analytical results do not indicate significant levels of indicator parameters with the exception of high specific conductance (1200 to 4500 micro-mhos/sec) and TDS (740 to 5200 mg/l.
15.	chemically fixed "open pile" just south of the impoundment. According to the site representative, each lagoon requires dredging after 8 years of operation.



ST. GABRIEL, LA.
SE/4 BATON ROUGE 15' QUADRANGL
N3015—W9100/7.5

1963

CARVILLE, LA.
NE/4 WHITE CASTLE 15' QUADRANGL
N3007.5—W9100/7.5



HYDROGEOLOGICAL STUDY
ST. GABRIEL, LOUISIANA

WOODWARD-CLYDE CONSULTANTS
CONSULTING ENGINEERS
BATON ROUGE, LOUISIANA

AIR PRODUCTS AND CHEMICALS
ST. GABRIEL PLANT
ST. GABRIEL, LOUISIANA

MADE BY: A.K.	DATE: 5/1/84	FILE NO. W4C5026
CHECKED BY: [illegible]	DATE: 5/17/84	

SITE PLAN FIGURE 1

Kemron Environmental Services

Sample Source: West Sludge Lagoon (total)
Collected by: Air Products
For: Air Products
Post Office Box 1
St. Gabriel, Louisiana 70776
Mr. Bob Martien

Report Date: 07/23/80
Date Collected: 06/05/80
Date Received: 07/09/80
Date(s) Analyzed: See Below
Data Number: 070980-15
Purchase Order Number:

Results of Analysis

Parameter	Results	Date Analyzed	Analyst
Arsenic (mg/kg As)	4.6	07/16/	JL 1400hrs.
Barium (mg/kg Ba)	317	07/18/	JL 1050hrs.
Cadmium (mg/kg Cd)	4.7	07/17/	JL 0830hrs.
Chromium (mg/kg Cr)	518	07/14/	JL 0900hrs.
Lead (mg/kg Pb)	50	07/18/	JL 0830hrs.
Mercury (mg/kg Hg)	<0.003	07/15/	JL 0830hrs.
Selenium (mg/kg Se)	<0.2	07/16/	JL 1030hrs.
Silver (mg/kg Ag)	0.64	07/16/	JL 1600hrs.
Zinc (mg/kg Zn)	1,360	07/18/	JL 1000hrs.
Nickel (mg/kg Ni)	1,640	07/18/	JL 1100hrs.
Cobalt (mg/kg Co)	18	07/18/	JL 1030hrs.

dr

Analysis Number: 80-149-01

M. Rao Arimilli

Official Methods Used In This Analysis

M. Rao Arimilli
Laboratory Supervisor

Borg Warner Corporation

Administrative Office: Marietta Ohio 235 Second Street (614) 374-2222 Zip 45750

Laboratory Locations:

☐ BATON ROUGE LOUISIANA 16550 Highland Road (504) 293-8650 Zip 70808
☐ CHICAGO ILLINOIS 3570 North Avondale Avenue (312) 588-8500 Zip 60618
☐ FARMINGTON HILLS MICHIGAN 32740 Northwestern Highway (313) 626-2426 Zip 48018
☐ MARIETTA OHIO 235 Second Street (614) 374-2222 Zip 45750
☐ PORT NECHES TEXAS 1216 Port Neches Avenue (713) 727-1661 Zip 77651

KEMRON®

Kemron Environmental Services

Sample Source: West Sludge Lagoon (Leachate)

Collected by: Air Products

For: Air Products

Post Office Box 1

St. Gabriel, Louisiana 70776

Mr. Bob Martien

Report Date: 07/23/80

Date Collected: 06/05/80

Date Received: 07/09/80

Date(s) Analyzed: See Below

Data Number: 070980-15

Purchase Order Number:

Results of Analysis

Parameter	Results	Date Analyzed / Analyst	
Arsenic (mg/L As)	0.016	07/16/JL	1400hrs.
Barium (mg/L Ba)	<0.10	07/18/JL	1050hrs.
Cadmium (mg/L Cd)	<0.001	07/17/JL	0830hrs.
Chromium (mg/L Cr)	<0.02	07/14/JL	1500hrs.
Lead (mg/L Pb)	<0.1	07/15/JL	1500hrs.
Mercury (mg/L Hg)	0.0004	07/15/JL	0830hrs.
Selenium (mg/L Se)	<0.003	07/16/JL	1030hrs.
Silver (mg/L Ag)	<0.003	07/16/JL	1500hrs.
Zinc (mg/L Zn)	0.31	07/14/JL	1400hrs.
Nickel (mg/L Ni)	0.73	07/18/JL	1100hrs.
Cobalt (mg/L Co)	<0.05	07/15/JL	1500hrs.

100.15 grams taken for Leachate test.

dr

Analysis Number: 80-149-01

M. Rao Arimilli

Official Methods Used In This Analysis

M. Rao Arimilli
Laboratory Supervisor

TABLE 6
MONITOR WELL ANALYTICAL DATA (GROUND WATER QUALITY)

WELL #	pH	SPEC. COND.	TDS	TOC	CHROMIUM	NICKEL	ZINC	TKN
1	6.8	1800	1000	50	0.01	0.04	0.031	< 1.0
2	6.9	1300	740	30	< 0.01	< 0.03	0.028	< 1.0
3	6.9	1700	1100	50	0.01	0.04	0.019	< 1.0
4	6.9	1850	1200	30	< 0.01	< 0.03	0.022	< 1.0
5	6.5	1200	810	5	< 0.01	0.04	0.018	< 1.0
6	7.0	1200	5200	100	0.01	< 0.03	0.037	< 1.0
7	6.7	4400	2400	< 1	< 0.01	0.05	0.015	10.4
8	6.7	4500	2400	20	< 0.01	0.04	0.015	9.8

NOTES:

1. All samples collected by Woodward Clyde Consultants and analyzed by West Paine Laboratories, Inc. Wells were sampled in period April 2 - 9, 1984.

2. pH in standard units, specific conductance in micromhoes/cm. Total dissolved solids (TDS), total organic carbon (TOC) total Kjeldahl nitrogen (TKN) and metals are in mg/l.

KEMRON

Sample Source: See Below
Collected by: Client
For: Air Products Company
Post Office Box 1
St. Gabriel, Louisiana 70776
ATTN: Bob Martien

Report Date: 03/02/84
Date Collected: 02/14/84
Date Received: 02/14/84
Date(s) Analyzed: See Below
Data Number: 021484-6
Purchase Order Number: G4-24494

Results of Analysis

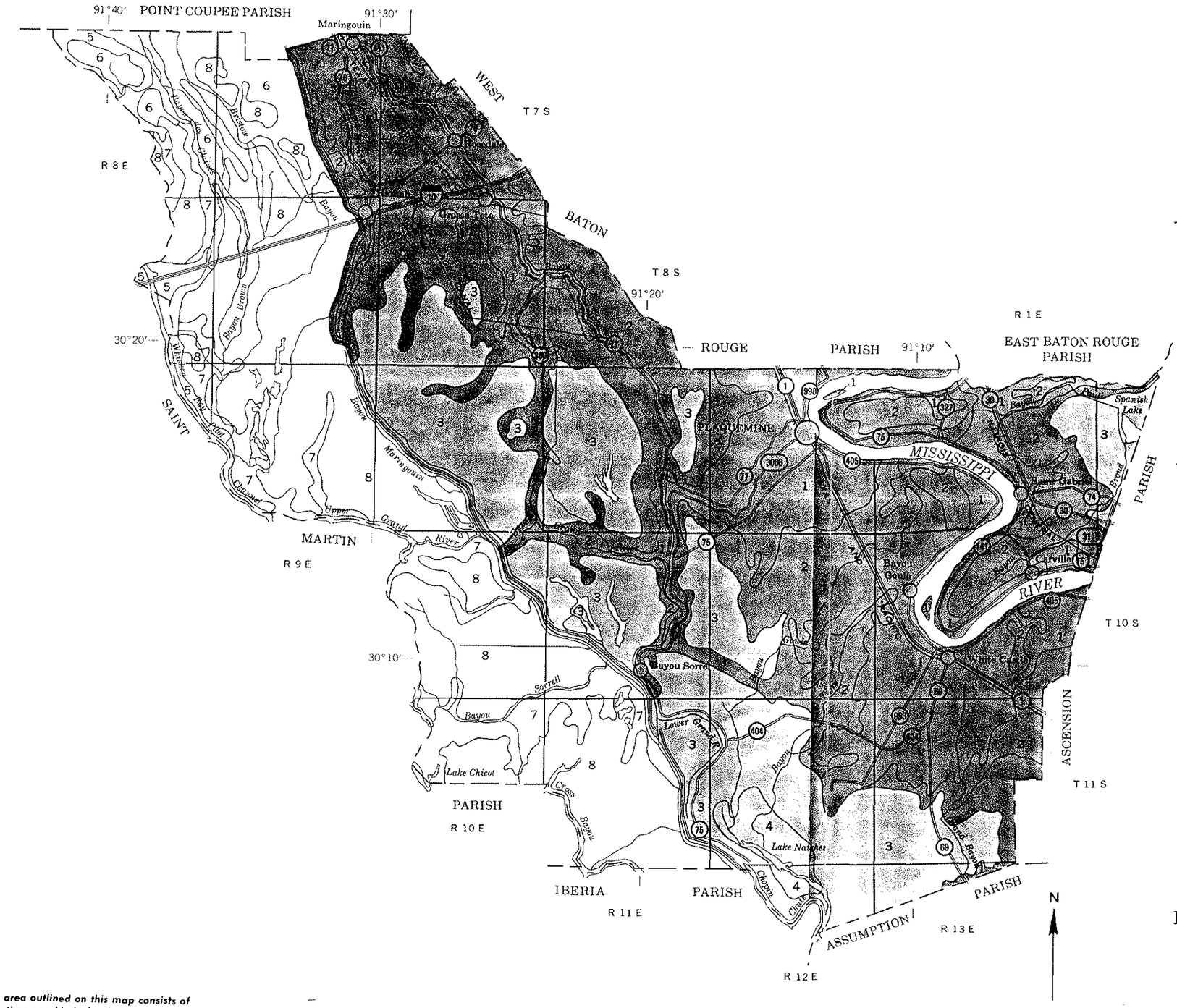
Parameter *	Sample Identification: East Lagoon TOTAL (mg/kg)	Sludge EPT LEACHATE (mg/l)	East Lagoon SUPERNATE (mg/l)	Date/Time Analyst
Nickel	158	0.26	0.30	02/17/1200/CNR
Chromium	19.6	<0.05	<0.05	02/20/0900/CNR
Arsenic	12.2	0.004	0.049	02/23/1600/CNR
Barium	68	<0.1	<0.1	02/20/1330/CNR
Cadmium	0.07	<0.005	<0.005	02/20/1030/CNR
Lead	5.6	<0.05	<0.05	02/20/1130/CNR
Mercury	0.053	0.0092	0.0005	02/20/1500/CNR
Selenium	<0.02	<0.002	<0.002	02/23/0900/CNR
Silver	0.11	<0.005	<0.005	02/20/1200/CNR
Zinc	81	0.024	0.10	02/20/1100/CNR
Cobalt	10.3	<0.05	<0.05	02/20/1300/CNR
Total Organic Carbon (mg/kg C)	9,610	---	62	02/15/1200/CNR
Total Kjeldahl Nitrogen (mg/kg N)	200	---	11.6	02/17/1000/LB
pH (pH Unit)	8.5**	---	9.5	02/14/1500/JR
Total Dissolved Solids	---	---	829	02/16/1500/CM
Specific Conductivity (umhos/cm)	---	---	1,250	02/21/1300/CNR

* Samples were preserved and analyzed as per approved EPA reference method cited in the following page.
** pH on total taken as (5 g/100 ml)

ms
Analysis Number: 84-10112-01

M. Rao Arimilli
Chief Chemist

Official Methods Used In This Analysis



LEGEND

SOILS THAT ARE SELDOM TO NEVER FLOODED; OUTSIDE THE ATCHAFALAYA BASIN FLOODWAY

- Commerce association: Nearly level, somewhat poorly drained loamy soils
- Sharkey association: Level, poorly drained clayey soils

SOILS THAT ARE FREQUENTLY FLOODED; OUTSIDE THE ATCHAFALAYA BASIN FLOODWAY

- 3 Sharkey-Fausse association: Level, poorly drained and very poorly drained, frequently flooded clayey soils
- 4 Barbary association: Level, very poorly drained, nearly continuously flooded clayey soils

SOILS THAT ARE OCCASIONALLY TO FREQUENTLY FLOODED; INSIDE THE ATCHAFALAYA BASIN FLOODWAY

- 5 Convent, flooded association: Level and gently undulating, somewhat poorly drained, occasionally flooded loamy soils
- 6 Sharkey, flooded association: Level, poorly drained, occasionally flooded clayey soils
- 7 Convent-Fausse association: Gently undulating and level, somewhat poorly drained and very poorly drained, frequently flooded loamy and clayey soils
- 8 Fausse-Sharkey association: Level, very poorly drained and poorly drained, frequently flooded clayey soils

Compiled 1976

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
LOUISIANA AGRICULTURAL EXPERIMENT STATION

GENERAL SOIL MAP

IBERVILLE PARISH, LOUISIANA

Scale 1:253,440

1 0 1 2 3 4 Miles

Each area outlined on this map consists of more than one kind of soil. The map is thus meant for general planning rather than a basis for decisions on the use of specific tracts.